

# Road Services Division 2011 Collision Data Report



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## Introduction

The King County Department of Transportation (KCDOT) is pleased to present the 2011 Collision Data Report. This report is prepared by the Road Services Division's Traffic Safety and Asset Inventory Unit of the Engineering Services Section.

This report was prepared to provide collision and safety information to elected officials, King County staff and the public.

The collision information provided in this report comes from the Washington State Department of Transportation (WSDOT) Collision Location Access Software (CLAS) database as of November 2012. This report covers only those collisions that occur on a county-maintained roadway within unincorporated King County, and meet the reporting threshold of \$700 in property damage or result in an injury or fatality.

Other information used in this report is courtesy of the State of Washington's Office of Financial Management, the County Road Administration Board (CRAB), the Washington State Department of Transportation, and the Road Services Division's Engineering Services Section.

A report is only as good as the data that it utilizes. For this reason it is important to be aware of the quality and limitations of the data in this report. While significant effort is directed toward quality control, databases of this size inherently contain data entry errors. The Officer's reports may also contain errors. Despite this, the overall quality of the data is considered acceptable for the purposes of this report.

## 1.0 EXECUTIVE SUMMARY

During 2011, a total of 1,501 vehicular collisions were reported on King County maintained roadways. This included 8 fatalities, 540 injury collisions and 953 property damage only collisions. The total estimated economical cost of these collisions was \$48 million dollars.

### 1.1 Six Year Trends

Annexations continue to reduce the actual size of unincorporated King County. Consequently, population, maintained road miles and annual million miles traveled on county roadways continue to decline. During 2011, six annexations occurred. The largest was the Kirkland annexation which included the Finn Hill, North Juanita and Kingsgate areas, encompassing 4,588 acres and a population of 31,718. The others included Wild Glen (18 acres) into Kirkland; Gaile (44 acres) and Tess (16 acres) into the City of Renton; Lundeen (89.54 acres) and Abbot-Blick Area (11.92 Acres) into the city of Enumclaw.

In 2006, the population of unincorporated King County was 367,000; in 2011 that number was 253,565, a difference of 113,435 people or a 31 percent decline in population. In 2006, the total number of road miles was 1,849; in 2011 the total number is 1,531, a decline of 318 road miles, or 17 percent. The number of collisions has also declined due to the smaller geographic area; in 2006, there were a total of 2,657 collisions compared to 1,501 in 2011, a decline of 1,156 collisions or 43 percent.

While the total number of collisions has continued to decline – the proportion of severity has stayed relatively the same. In 2006, fatal collisions were less than 1 percent of the total, injury collisions made up 38 percent and property damage only collisions amounted to 61 percent of the total. In 2011, fatal collisions were less than 1 percent, injury collisions were 36 percent of the total and property damage only collisions made up the remaining 63 percent.

Table 1.1.1  
Number of Collisions  
By Severity

Year	Property Damage Only	Percentage	Injury	Percentage	Fatality	Percentage	Total	Percentage
2006	1,625	61.16	1,012	38.09	20	0.75	2,657	100
2007	1,562	63.99	863	35.35	16	0.66	2,441	100
2008	1,398	64.78	744	34.48	16	0.74	2,158	100
2009	1,341	64.78	722	34.88	7	0.34	2,070	100
2010	1,133	65.08	600	34.46	8	0.46	1,741	100
2011	953	63.49	540	35.98	8	0.53	1,501	100

## 1.2 Collision Rates and Road Miles

Table 1.2.1  
Collision Rate per Million Vehicle Miles Traveled

Year	Total Collision Reports	Average Daily Traffic Volumes (ADT)	Maintained Road Miles	Annual Million Miles Driven	Collision Rate
2006	2,657	4,089	1,849	2,760	0.96
2007	2,441	4,373	1,855	2,961	0.82
2008	2,158	4,034	1,758	2,588	0.83
2009	2,070	3,667	1,743	2,333	0.89
2010	1,741	2,377	1,632	1,416	1.23
2011	1,501	1,798	1,531	1,005	1.49

Table 1.2.2  
Collision Rate per 100,000 Population

Year	All Collision Types			Pedestrian		Bicycle	
	Population	# of Collisions	Collisions per 100,000 Population	# of Collisions	Collisions per 100,000 Population	# of Collisions	Collisions per 100,000 Population
2006	367,000	2,657	723.98	32	8.72	26	7.08
2007	368,300	2,441	662.77	38	10.32	23	6.24
2008	341,150	2,158	632.57	35	10.26	25	7.33
2009	343,180	2,070	603.18	29	8.45	16	4.66
2010	284,100	1,741	612.81	28	9.86	24	8.45
2011	253,565	1,501	591.96	27	10.65	29	11.44

Table 1.2.3  
Road Miles By  
Federal Functional Classification (FFC)

Federal Functional Class (FFC) Description	FFC	Road Miles	Annual Average Daily Traffic Volume (AADT)	Annual Million Vehicle Miles Traveled (VMT)
Rural Minor Arterial	6	36	5677	<b>75</b>
Rural Major Collector	7	101	2605	<b>96</b>
Rural Minor Collector	8	130	1187	<b>56</b>
Rural Local Access	9	400	631	<b>92</b>
Urban Principal Arterial	14	38	13644	<b>189</b>
Urban Minor Arterial	16	78	6600	<b>188</b>
Urban Collector	17	80	3551	<b>104</b>
Urban Local Access	19	668	841	<b>205</b>
<b>Total</b>		<b>1531</b>		<b>1005</b>
<b>Overall Weighted Average</b>			<b>1798</b>	

### 1.3 Collisions by Type and Severity

Table 1.3.1  
2011 Collisions by First Collision Type

Collision Type	# of Collisions	Percentage
Fixed Object	467	31.1
Rear End	320	21.3
Entering At Angle	180	12.0
Hit Parked Car	93	6.2
Left Turn	93	6.2
Driveway Exit	69	4.6
Vehicle Overturned	54	3.6
Sideswipe	53	3.5
Other	51	3.4
Bicycle	29	1.9
Pedestrian	27	1.8
Head On	21	1.4
Right Turn	17	1.1
Animal	14	0.9
Leaving Parked Position	11	0.7
Entering Driveway	2	0.1
Total:	1501	100.0

*\*\*Vehicle overturned includes motorcycle collisions.*

Table 1.3.2  
2011 Collisions by Severity  
And Transportation Mode

Transportation Mode	*PDO	% of PDO	Injury	% of Injury	Fatal	% of Fatal	Total	% of Total
Pedestrian	0	0.0	26	4.8	1	12.5	27	2%
Bicycle	0	0.0	29	5.4	0	0.0	29	2%
Motorcycle	4	0.4	31	5.7	2	25.0	37	2%
Motor Vehicle	949	99.6	454	84.1	5	62.5	1408	94%
<b>Total</b>	<b>953</b>	<b>100</b>	<b>540</b>	<b>100</b>	<b>8</b>	<b>100</b>	<b>1501</b>	<b>100%</b>

*\*Property Damage Only*

Table 1.3.3  
2011 Fatalities by  
Motor Vehicle Occupant

Motor Vehicle Occupant	Fatalities
Motor vehicle driver	4
Motorcycle driver	2
Motor vehicle passenger	1
Non Occupant	
Pedestrian	1
<b>Total</b>	<b>8</b>

## 2.0 COLLISION TRENDS

### 2.1 Collision Rates and Fatality and Fatal Rates

Table 2.1.1  
Fatality Rate per 100,000 Population

Year	Population	All Collision Types		Pedestrian		Bicycle	
		# of Fatalities	Fatalities per 100,000 population	# of Fatalities	Fatalities per 100,000 population	# of Fatalities	Fatalities per 100,000 population
2006	367,000	21	5.72	2	0.54	0	0.00
2007	368,300	16	4.34	2	0.54	1	0.27
2008	341,150	17	4.98	1	0.29	1	0.29
2009	343,180	7	2.04	0	0.00	0	0.00
2010	284,100	8	2.82	1	0.35	1	0.35
2011	253,565	8	3.16	1	0.39	0	0.00

Table 2.1.2  
Fatal Collision Rate per 100,000 Population

Year	Population	All Collision Types		Pedestrian		Bicycle	
		# of Fatal Collisions	Fatal Collisions per 100,000 Population	# of Fatal Collisions	Fatal Collisions per 100,000 Population	# of Fatal Collisions	Fatal Collisions per 100,000 Population
2006	367,000	20	5.45	2	0.54	0	0.00
2007	368,300	16	4.34	2	0.54	1	0.27
2008	341,150	16	4.69	1	0.29	1	0.29
2009	343,180	7	2.04	0	0.00	0	0.00
2010	284,100	8	2.82	1	0.35	1	0.35
2011	253,565	8	3.16	1	0.39	0	0.00

**Table 2.1.3**  
**Fatality Rate**  
**Per 100 Million Vehicle Miles Traveled**

Year	Number of Fatalities	Maintained Road Miles	Annual 100 Million Miles Traveled	Fatality Rate
2006	21	1,849	27.60	0.76
2007	16	1,855	29.61	0.54
2008	17	1,758	25.88	0.66
2009	7	1,743	23.33	0.30
2010	8	1,632	14.16	0.56
2011	8	1,531	10.05	0.80

**Table 2.1.4**  
**Fatal Collision Rate per**  
**100 Million Vehicle Miles Traveled**

Year	Number of Fatal Collisions	Maintained Road Miles	Annual 100 Million Miles Traveled	Fatal Collision Rate
2006	20	1,849	27.60	0.72
2007	16	1,855	29.61	0.54
2008	16	1,758	25.88	0.62
2009	7	1,743	23.33	0.30
2010	8	1,632	14.16	0.56
2011	8	1,531	10.05	0.80

## 2.2 US, State, and Unincorporated King County Collision, Fatal Collision, and Fatality Rate

Table 2.2.1

US, State, and Unincorporated King County Collision Rate per 100,000 Population

Year	Unincorporated King County			Washington State			United States		
	Population	Collisions	Collisions per 100,000 Population	Population	Collisions	Collisions per 100,000 Population	Population	Collisions	Collisions per 100,000 Population
2006	367,000	2,657	724	6,361,000	132,499	2,083	298,363,000	5,973,000	2,002
2007	368,300	2,441	663	6,450,000	128,827	1,997	301,290,000	6,024,000	1,999
2008	341,150	2,158	633	6,549,000	119,410	1,823	304,060,000	5,811,000	1,911
2009	343,180	2,070	603	6,668,200	102,859	1,543	305,529,000	5,505,000	1,802
2010	284,100	1,741	613	6,724,500	101,576	1,511	308,746,000	5,419,000	1,755
2011	253,565	1,501	592	6,801,100	98,820	1,453	311,592,000	Unavailable	Unavailable

Table 2.2.2

US, State, and Unincorporated King County Fatal Collision and Fatality Rate per 100,000 Population

Year	Unincorporated King County			Washington State			United States		
	Population	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population	Population	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population	Population	Fatal Collisions per 100,000 population	Fatalities per 100,000 population
2006	367,000	5.45	5.72	6,361,000	9.09	9.95	298,363,000	12.95	14.72
2007	368,300	4.34	4.34	6,450,000	8.23	8.85	301,290,000	12.42	14.31
2008	341,150	4.69	4.98	6,549,000	7.34	7.96	304,060,000	11.19	13.69
2009	343,180	2.04	2.04	6,668,200	7.34	7.96	305,529,000	10.08	11.09
2010	284,100	2.82	2.82	6,724,500	6.28	6.84	308,746,000	10.8	10.65
2011	253,565	3.16	3.16	6,801,100	6.19	6.68	311,592,000	9.55	10.39

Source: Washington State Department of Transportation and the National Highway Traffic Safety Administration

Table 2.2.3  
US, State, and Unincorporated King County  
Collision Rate per Million Vehicle Miles Traveled (VMT)

Year	Unincorporated King County			Washington State			United States		
	Million VMT	Collisions	Collisions per Million VMT	Million VMT	Collisions	Collisions per Million VMT	Million VMT	Collisions	Collisions per Million VMT
2006	2,760	2,657	0.96	56,696	132,499	2.34	3,014,000	5,973,000	1.98
2007	2,961	2,441	0.82	56,900	128,827	2.26	3,030,000	6,024,000	1.99
2008	2,588	2,158	0.83	55,213	119,410	2.16	2,926,000	5,811,000	1.99
2009	2,333	2,070	0.89	56,552	102,859	1.82	2,975,000	5,505,000	1.85
2010	1,416	1,741	1.23	57,190	101,576	1.78	2,985,000	5,419,000	1.82
2011	1,005	1,501	1.49	56,750	98,820	1.74	2,946,000	Unavailable	Unavailable

Table 2.2.4  
US, State, and Unincorporated King County Fatal Collision  
and Fatality Rates per 100 Million Vehicle Miles Traveled (VMT)

Year	Unincorporated King County			Washington State			United States		
	100 Million VMT	Fatal Collision Rate per 100 Million VMT	Fatality Rate per 100 Million VMT	100 Million VMT	Fatal Collision Rate per 100 Million VMT	Fatality Rate per 100 Million VMT	100 Million VMT	Fatal Collision Rate per 100 Million VMT	Fatality Rate per 100 Million VMT
2006	27.6	0.72	0.76	567	1.02	1.12	30,140	1.28	1.42
2007	29.61	0.54	0.54	569	0.93	1.00	30,300	1.24	1.36
2008	25.88	0.62	0.66	552	0.87	0.94	29,260	1.16	1.27
2009	23.33	0.30	0.30	566	0.8	0.87	29,750	1.04	1.14
2010	14.16	0.56	0.56	572	0.74	0.80	29,850	1.02	1.11
2011	10.05	0.80	0.80	568	0.74	0.80	29,460	1.01	1.10

Source: Washington State Department of Transportation and the National Highway Traffic Safety Administration

2.3 Urban versus Rural Roads - Fatal Collision and Fatality Rates

Table 2.3.1  
 Urban versus Rural Roads in Unincorporated King County  
 Fatal Collision and Fatality Rate per 100,000 Population

Urban Roads in Unincorporated King County						Rural Roads in Unincorporated King County					
Year	Population	# of Fatal Collisions	# of Fatalities	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population	Population	# of Fatal Collisions	# of Fatalities	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population	
2006	225,000	12	13	5.33	5.78	142,000	8	8	5.63	5.63	
2007	226,300	11	11	4.86	4.86	142,000	5	5	3.52	3.52	
2008	197,150	8	9	4.06	4.57	144,000	8	8	5.56	5.56	
2009	218,780	6	6	2.74	2.74	124,400	1	1	0.80	0.80	
2010	160,500	5	5	3.12	3.12	123,600	3	3	2.43	2.43	
2011	129,500	4	4	3.09	3.09	124,065	4	4	3.22	3.22	

**Table 2.3.2**  
**Urban versus Rural Roads in Unincorporated King County**  
**Fatal Collision Rate per 100 Million Vehicle Miles Traveled**

Year	Fatal Collisions			Maintained Road Miles			Annual 100 Million VMT			Fatal Collision Rate per 100 Million VMT		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2006	12	8	20	1,171	678	1,849	22.60	5.00	27.58	0.53	1.60	0.73
2007	11	5	16	1,178	677	1,855	24.20	5.40	29.59	0.45	0.93	0.54
2008	8	8	16	1,082	676	1,758	21.03	4.90	25.88	0.38	1.63	0.62
2009	6	1	7	1,075	668	1,743	19.00	4.30	23.32	0.32	0.23	0.30
2010	5	3	8	968	664	1,632	10.98	3.20	14.16	0.46	0.94	0.56
2011	4	4	8	864	667	1,531	6.86	3.19	10.05	0.58	1.25	0.80

**Table 2.3.3**  
**Urban versus Rural Roads in Unincorporated King County**  
**Fatality Rate per 100 Million Vehicle Miles Traveled**

Year	Fatalities			Maintained Road Miles			Annual 100 Million VMT			Fatalities per 100 Million VMT		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2006	13	8	21	1,171	678	1,849	22.60	5.04	27.58	0.58	1.59	0.76
2007	11	5	16	1,178	677	1,855	24.21	5.41	29.59	0.45	0.92	0.54
2008	9	8	17	1,082	676	1,758	21.03	4.91	25.88	0.43	2.04	0.66
2009	6	1	7	1,075	668	1,743	19.00	4.31	23.32	0.32	0.23	0.30
2010	5	3	8	968	664	1,632	10.98	3.18	14.16	0.46	0.94	0.56
2011	4	4	8	864	667	1,531	6.86	3.19	10.05	0.58	1.25	0.80

Table 2.3.4  
Urban versus Rural Collision Rate  
per Million Vehicle Miles Traveled (VMT)

Year	Number of Collisions			Maintained Road Miles			Annual Million VMT			Collisions per Million VMT		
	Rural	Urban	Total	Rural*	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
2006	436	2,221	2,657	678	1,171	1,849	504	2,260	2,764	0.87	0.98	0.96
2007	400	2,041	2,441	677	1,178	1,855	540	2,421	2,961	0.74	0.84	0.82
2008	426	1,732	2,158	676	1,082	1,758	491	2,103	2,594	0.87	0.82	0.83
2009	411	1,659	2,070	668	1,075	1,743	431	1,900	2,331	0.95	0.87	0.89
2010	329	1,412	1,741	664	968	1,632	318	1,098	1,416	1.03	1.29	1.23
2011	366	1,135	1,501	667	864	1,531	319	686	1,005	1.15	1.65	1.49

\*Assumes 28% rural road miles for 2006

2.4 Collisions by Road Classification

**Table 2.4.1**  
**Collisions by King County Road Classification**

Year	Principal Arterial	Minor Arterial	Collector	Local Access	Total
2006	674	643	653	687	2,657
2007	616	659	572	594	2,441
2008	545	592	498	523	2,158
2009	512	538	517	503	2,070
2010	422	489	379	451	1,741
2011	336	441	349	375	1,501

**Table 2.4.2**  
**Collisions by King County Road Classification and Severity**

Year	<i>Fatal Collisions</i>					<i>Injury Collisions</i>					<i>Property Damage Only Collisions</i>				
	Principal	Minor	Collector	Local	Total	Principal	Minor	Collector	Local	Total	Principal	Minor	Collector	Local	Total
2006	4	5	9	2	20	264	275	276	197	1,012	406	363	368	488	1,625
2007	5	3	3	5	16	236	250	224	153	863	375	406	345	436	1,562
2008	1	5	8	2	16	193	218	189	144	744	351	369	301	377	1,398
2009	0	2	4	1	7	204	218	179	121	722	308	318	334	381	1,341
2010	2	3	2	1	8	156	184	150	110	600	264	302	227	340	1,133
2011	1	1	5	1	8	136	165	131	108	540	199	275	213	266	953

### 3.0 COLLISION TYPES

#### 3.1 Collision Severity

Table 3.1.1  
Collisions by Severity

Year	Fatal	Percent	Injury	Percent	Property Damage Only	Percent	Total
2006	20	0.8%	1,012	38.1%	1,625	61.2%	2,657
2007	16	0.7%	863	35.4%	1,562	64.0%	2,441
2008	16	0.7%	744	34.5%	1,398	64.8%	2,158
2009	7	0.3%	722	34.9%	1,341	64.8%	2,070
2010	8	0.5%	600	34.5%	1,133	65.1%	1,741
2011	8	0.5%	540	36.0%	953	63.5%	1,501

Table 3.1.2  
Collisions by Collision Type

Collision Type	2006	2007	2008	2009	2010	2011
Fixed object	720	670	606	595	563	467
Rear - end	566	506	454	435	382	320
Entering at angle	377	331	271	220	204	180
Hit Parked Car	200	211	187	194	135	93
Left turn	151	136	117	143	96	93
Driveway - Exiting	100	87	88	81	58	69
Vehicle overturned	86	98	69	89	61	54
Sideswipe	119	97	99	76	51	53
Other	119	97	79	81	53	51
Bicycle	26	23	25	16	24	29
Pedestrian	32	38	35	29	28	27
Head on	40	39	33	33	24	21
Right Turn	13	6	9	15	15	17
Animal	17	14	19	16	10	14
Leaving Parked Position	16	13	8	7	14	11
Driveway - Entering	75	75	59	40	23	2
<b>Totals</b>	<b>2,657</b>	<b>2,441</b>	<b>2,158</b>	<b>2,070</b>	<b>1,741</b>	<b>1,501</b>

Table 3.1.3  
Fatalities by Collision Type

Collision Type	2006	2007	2008	2009	2010	2011
Fixed object	10	5	8	5	2	4
Vehicle overturned	1	2	2	1	0	2
Head on	0	3	1	0	1	1
Pedestrian	2	2	1	0	1	1
Animal	0	0	1	0	0	0
Bicycle	0	1	1	0	1	0
Driveway	1	2	1	0	0	0
Entering at angle	0	0	2	0	0	0
Hit Parked Car	0	1	0	0	0	0
Left turn	1	0	0	0	2	0
Other	3	0	0	1	0	0
Rear - end	2	0	0	0	1	0
Sideswipe	1	0	0	0	0	0
<b>Totals</b>	<b>21</b>	<b>16</b>	<b>17</b>	<b>7</b>	<b>8</b>	<b>8</b>

Table 3.1.4  
2011 Collisions by Collision Type and Severity

Collision Type	*PDO	Injury	Fatal	Total
Fixed object	306	157	4	<b>467</b>
Rear - end	192	128	0	<b>320</b>
Entering at angle	119	61	0	<b>180</b>
Hit Parked Car	84	9	0	<b>93</b>
Left turn	56	37	0	<b>93</b>
Driveway Exiting	50	19	0	<b>69</b>
Vehicle overturned	24	28	2	<b>54</b>
Sideswipe	49	4	0	<b>53</b>
Other	31	20	0	<b>51</b>
Bicycle	0	29	0	<b>29</b>
Pedestrian	0	26	1	<b>27</b>
Head on	7	13	1	<b>21</b>
Right Turn	12	5	0	<b>17</b>
Animal	10	4	0	<b>14</b>
Leaving Parked Position	11	0	0	<b>11</b>
Driveway Entering	2	0	0	<b>2</b>
<b>Total</b>	<b>953</b>	<b>540</b>	<b>8</b>	<b>1501</b>

**Table 3.1.5**  
**2011 Collisions by First Object Struck and Severity**

<b>First Object Struck</b>	<b>PDO</b>	<b>Injury</b>	<b>Fatal</b>	<b>Total</b>
Utility Pole	40	34	0	74
Tree or Stump (stationary)	40	28	0	68
Roadway Ditch	44	9	0	53
Fence	36	13	1	50
Guardrail - Face	25	14	0	39
Other Objects	23	4	0	27
Mailbox	17	7	0	24
Wood Sign Post	18	4	2	24
Earth Bank or Ledge	12	10	0	22
Over Embankment - No Guardrail Present	6	6	0	12
Guardrail - Leading End	5	5	0	10
Retaining Wall (concrete, rock, brick, etc.)	7	2	0	9
Fire Hydrant	7	1	0	8
Boulder (stationary)	2	5	0	7
Curb, Raised Traffic Island or Raised Median Curb	4	2	0	6
Guardrail - Through, Over or Under	1	3	0	4
Street Light Pole or Base	4	0	0	4
Building	2	1	0	3
Culvert and/or other Appurtenance in Ditch	1	2	0	3
Metal Sign Post	1	2	0	3
Bridge Rail - Face	1	1	0	2
Concrete Barrier/Jersey Barrier - Face	2	0	0	2
Fallen tree hit by vehicle (on the road)	1	1	0	2
Not Stated	2	0	0	2
Signal Pole	1	0	1	2
Utility Box	1	1	0	2
Bridge Abutment	1	0	0	1
Bridge Rail - Leading End	0	1	0	1
Manhole Cover	1	0	0	1
Rock Bank or Ledge	1	0	0	1
Underside of Bridge	0	1	0	1
<b>Total</b>	<b>306</b>	<b>157</b>	<b>4</b>	<b>467</b>

### 3.2 Fixed Object Collisions

**Table 3.2.1**  
Collision Rate per Million Vehicle Miles Traveled (VMT) for Collisions Involving Fixed Objects

Year	Fixed Object Collisions			Average Daily Traffic Volumes			Maintained Road Miles			Annual Million VMT			Fixed Object Collisions per Million VMT		
	Urban	Rural	Total	Urban	Rural	Weighted Average	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	All Roads
2006	511	209	720	5,276	2,037	4,087	1,171	678	1,849	2,255	503	2,758	0.23	0.41	0.26
2007	469	201	670	5,626	2,185	2,185	1,178	677	1,855	2,419	540	2,959	0.19	0.37	0.23
2008	377	229	606	5,312	1,986	1,986	1,082	676	1,758	2,098	490	2,588	0.18	0.47	0.23
2009	395	200	595	4,845	1,768	1,768	1,075	668	1,743	1,901	431	2,332	0.21	0.46	0.26
2010	396	167	563	3,108	1,312	1,312	968	664	1,632	1,098	318	1,416	0.36	0.53	0.40
2011	273	194	467	2,175	1,310	1,310	864	667	1,531	686	319	1,005	0.40	0.61	0.47

Figure 3.2.1  
Fatal Collisions Involving Fixed Objects as a  
Percentage of All Fatal Collisions

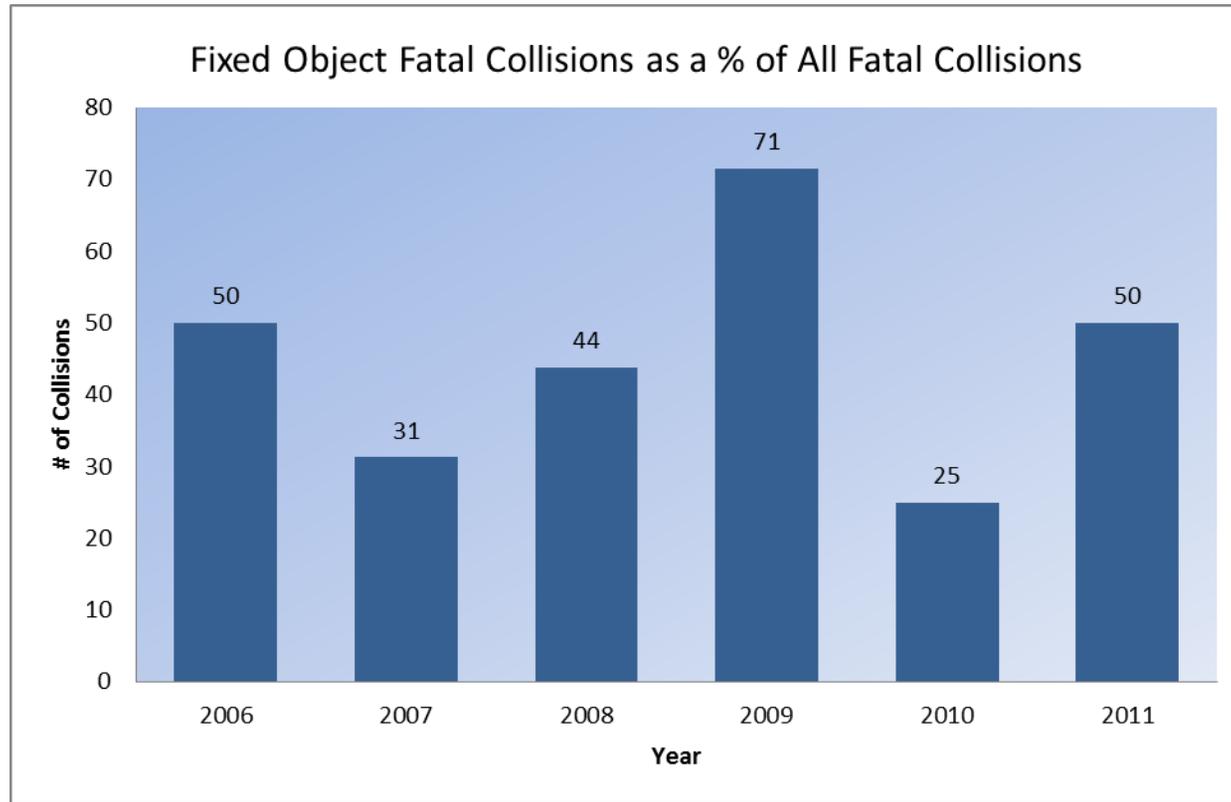
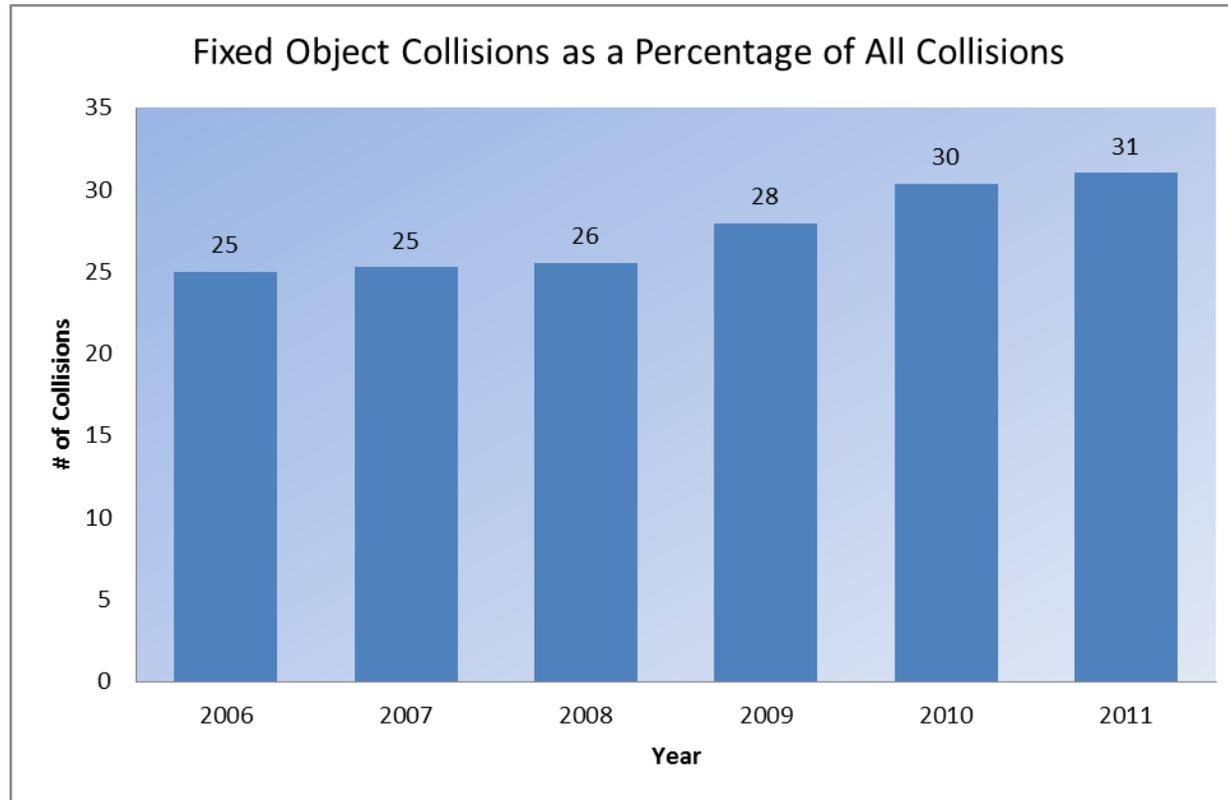


Figure 3.2.2  
Collisions Involving Fixed Objects as a  
Percentage of All Collisions



### 3.3 Pedestrian Collisions

Table 3.3.1  
Pedestrian Collisions by Severity

Year	Collision Severity			Total Collisions
	Fatal	Injury	Property Damage Only	
2006	2	30	0	32
2007	2	36	0	38
2008	1	34	0	35
2009	0	29	0	29
2010	1	27	0	28
2011	1	26	0	27

Table 3.3.2  
2011 Pedestrian Collisions by Facility Used and Severity

Facility	No Injury	Injury	Fatality	Total
Marked X walk	0	13	0	13
Roadway	0	7	1	8
Shoulder	0	3	0	3
Unmarked X walk	0	2	0	2
Sidewalk	0	1	0	1
Total:	0	26	1	27

Table 3.3.3  
Pedestrian Collisions by Contributing Circumstance

Contributing Circumstance	2006	2007	2008	2009	2010	2011
Fail to Yield Row to Pedestrian	15	11	14	11	12	13
None	7	15	8	5	9	9
Other	2	5	5	6	6	1
Exceeding Reasonable Safe Speed	0	1	1	2	0	1
Inattention	1	1	0	2	0	1
Operating Defective Equipment	0	0	2	0	0	1
Disregard Stop and Go Light	1	0	0	0	0	1
Driver Distractions Outside Vehicle	0	0	0	2	0	0
Under Influence of Drugs	0	0	0	1	0	0
Apparently Ill	0	0	1	0	0	0
Disregard Stop Sign - Flashing Red	1	0	0	0	0	0
Driver Interacting with Passengers, Animal	0	1	0	0	0	0
Driver Smoking	0	1	0	0	0	0
Exceeding Stated Speed Limit	1	0	1	0	1	0
Improper Backing	0	0	1	0	0	0
Improper Passing	1	0	0	0	0	0
Improper Turn	0	1	0	0	0	0
Other Driver Distractions Inside Vehicle	0	0	1	0	0	0
Under Influence of Alcohol	3	1	1	0	0	0
Unknown Driver Distraction	0	1	0	0	0	0
<b>Total</b>	<b>32</b>	<b>38</b>	<b>35</b>	<b>29</b>	<b>28</b>	<b>27</b>

**Table 3.3.4**  
Age of Pedestrians Involved in Collisions

Age Range	2006	2007	2008	2009	2010	2011
Unknown	1	3	2	2	2	0
0-5	1	3	0	1	1	1
6-10	2	1	2	0	2	2
11-15	5	1	6	5	3	6
16-20	3	5	5	4	5	3
21-25	3	2	3	3	2	2
26-30	4	0	2	0	3	1
31-35	1	4	3	3	0	1
36-40	2	3	3	2	2	2
41-45	3	3	3	0	2	2
46-50	1	2	1	1	1	0
51-55	0	3	2	5	0	1
56-60	2	1	2	3	1	4
61-65	1	2	1	0	1	0
66-70	0	2	0	0	0	0
71-75	2	1	0	0	2	0
76-80	0	1	0	0	1	2
81-85	1	0	0	0	0	0
86+	0	1	0	0	0	0
<b>Total</b>	<b>32</b>	<b>38</b>	<b>35</b>	<b>29</b>	<b>28</b>	<b>27</b>

**Table 3.3.5**  
Gender of Pedestrians Involved in Collisions

Year	Unknown	Female	Male	Total
2006	8	7	17	24
2007	9	15	14	29
2008	0	15	20	35
2009	1	9	19	28
2010	2	10	16	26
2011	0	14	13	27

### 3.4 Bicycle Collisions

Table 3.4.1  
Bicycle Collisions by Severity

Year	PDO	Injury	Fatal	Total
2006	2	24	0	26
2007	1	21	1	23
2008	0	24	1	25
2009	1	15	0	16
2010	0	23	1	24
2011	0	29	0	29

### 3.5 Motorcycle Involved Collisions

Table 3.5.1  
Motorcycle Involved Collisions  
By Severity

Year	Property Damage Only	Injury	Fatality	Total
2006	10	70	6	86
2007	7	55	2	64
2008	8	49	3	60
2009	7	57	1	65
2010	12	38	2	52
2011	4	31	2	37

## 4.0 OTHER COLLISION INFORMATION

### 4.1 Estimated Economic Costs

Table 4.1.1  
Estimated Economic Costs

Severity	2011 Collisions	Estimated Cost
Property Damage Only	953	\$5,718,000.00
Injury	540	\$35,100,000.00
Fatal	8	\$8,000,000.00
Total	1501	\$48,818,000.00

*The following estimated costs per accident are used in this calculation:  
Property Damage Only-\$6,000, Injury-\$65,000, Fatality-\$1,000,000*

4.2 Month, Day of Week, and Time of Day

Figure 4.2.1  
2011 Collisions by Month

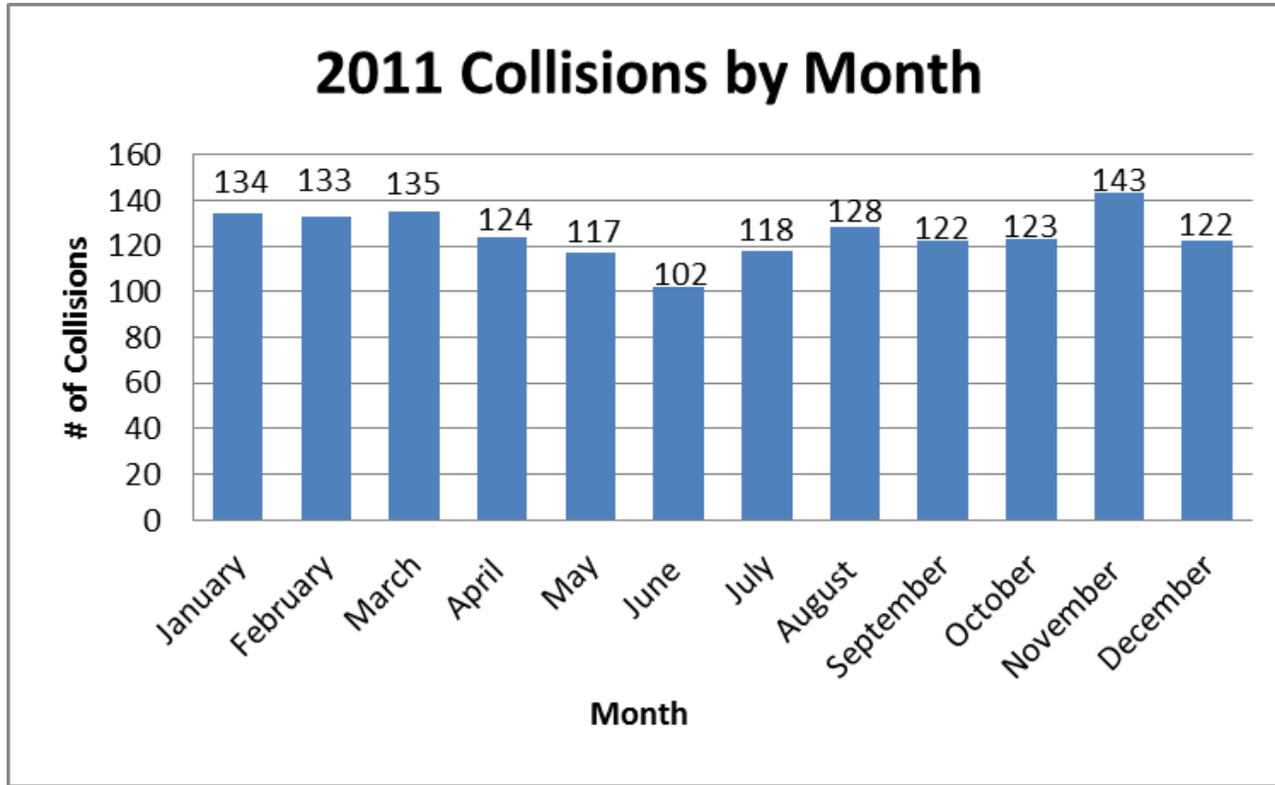


Figure 4.2.2  
2011 Collisions by Day of Week

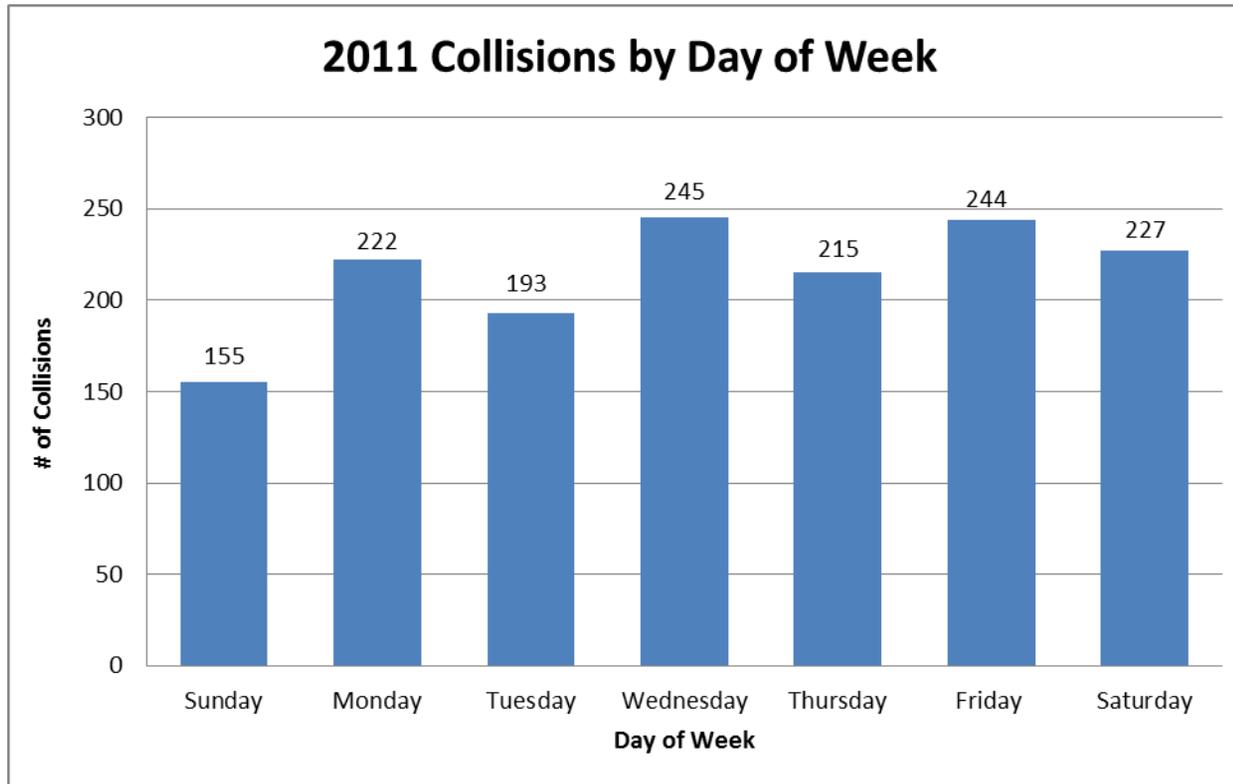


Figure 4.2.3  
2011 Weekday Collisions  
By Time of Day

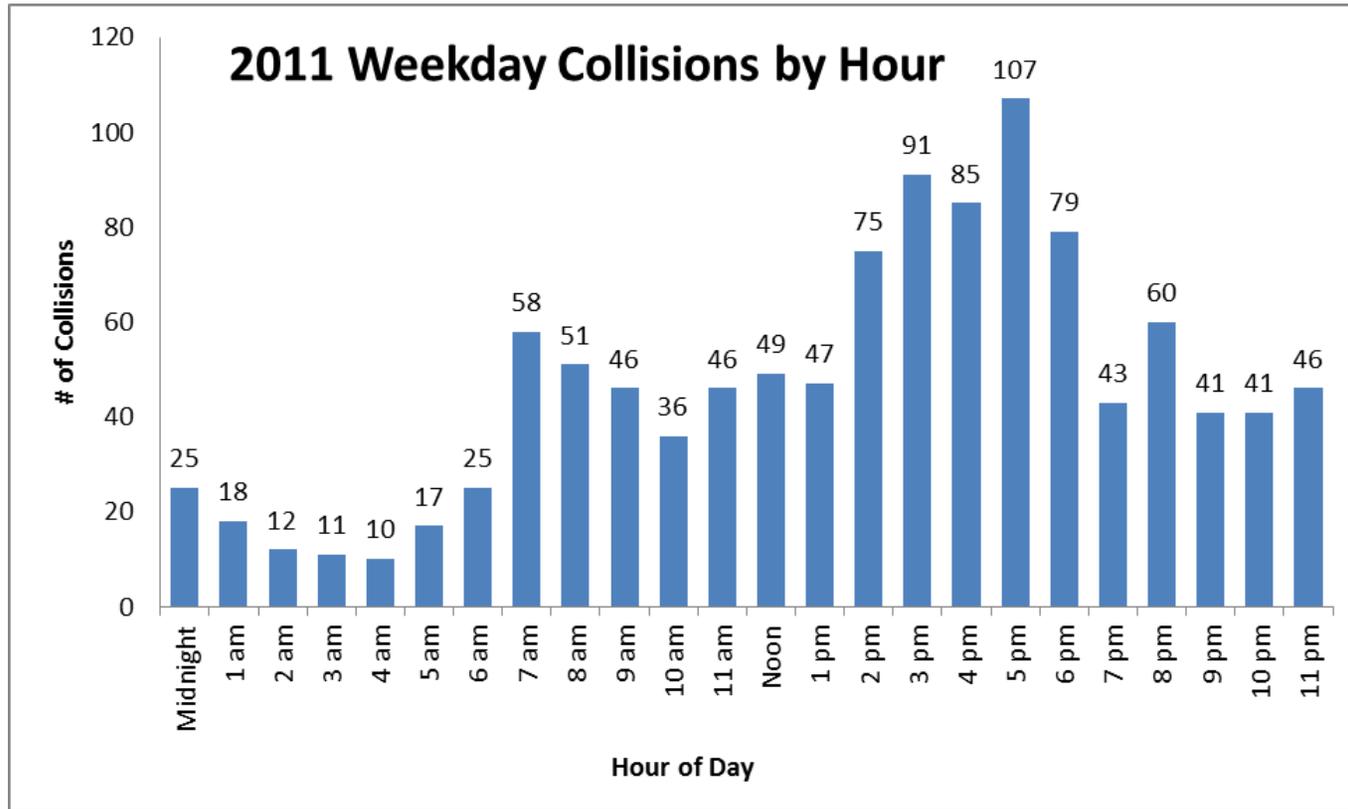
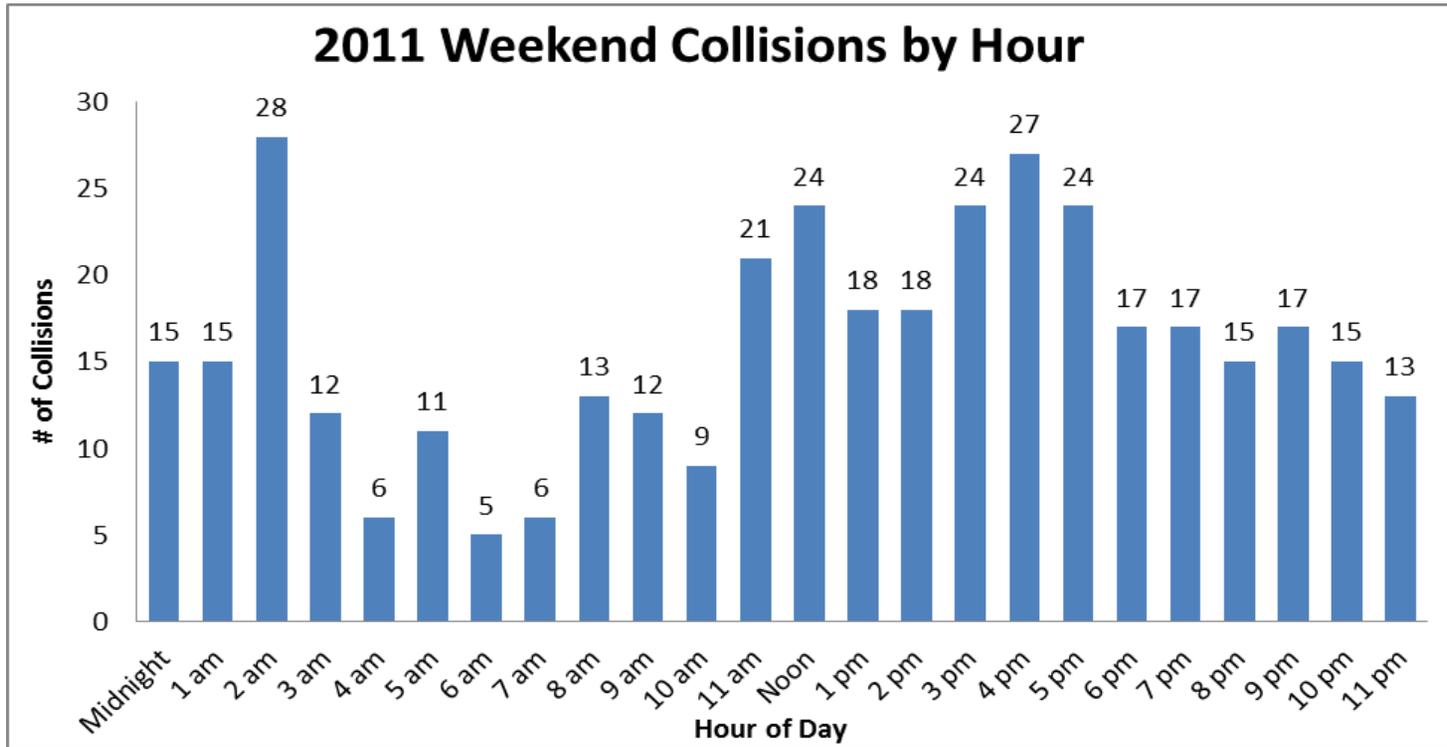


Figure 4.2.4  
2011 Weekend Collisions  
By Time of Day



### 4.3 Weather Conditions

Table 4.3.1  
Fatal Collisions by Weather Condition

Year	Clear or Partly Cloudy	Fog or Smog or Smoke	Overcast	Raining	Unknown	Total
2006	13	1	5	1	0	<b>20</b>
2007	10	0	3	3	0	<b>16</b>
2008	6	1	7	2	0	<b>16</b>
2009	2	0	4	0	1	<b>7</b>
2010	5	0	2	1	0	<b>8</b>
2011	5	1	2	0	0	<b>8</b>

Table 4.3.2  
Injury Collisions by Weather Condition

Year	Blowing Sand or Dirt or Snow	Clear or Partly Cloudy	Fog or Smog or Smoke	Other	Overcast	Raining	Severe Crosswind	Sleet , Hail or Freezing Rain	Snowing	Unknown	Total
2006	0	633	13	1	145	199	2	1	1	17	1012
2007	0	529	12	2	161	146	1	1	7	4	863
2008	0	431	6	0	150	134	0	2	18	3	744
2009	0	470	11	1	103	117	0	4	12	4	722
2010	1	344	6	0	85	151	1	0	6	6	600
2011	0	340	1	1	93	97	0	1	2	5	540

Table 4.3.3  
Property Damage Collisions by Weather Condition

Year	Blowing Sand or Dirt or Snow	Clear or Partly Cloudy	Fog or Smog or Smoke	Other	Overcast	Raining	Severe Crosswind	Sleet , Hail or Freezing Rain	Snowing	Unknown	Total
2006	0	943	13	4	249	349	2	1	16	48	1625
2007	2	859	8	5	277	330	2	4	27	48	1562
2008	0	735	8	2	272	312	0	5	30	34	1398
2009	0	800	32	2	189	253	1	5	29	30	1341
2010	1	605	6	5	182	287	0	1	23	23	1133
2011	0	507	4	0	199	207	0	4	12	20	953

## 4.4 Demographics

Figure 4.4.1  
2011 Collisions  
By Age of Driver

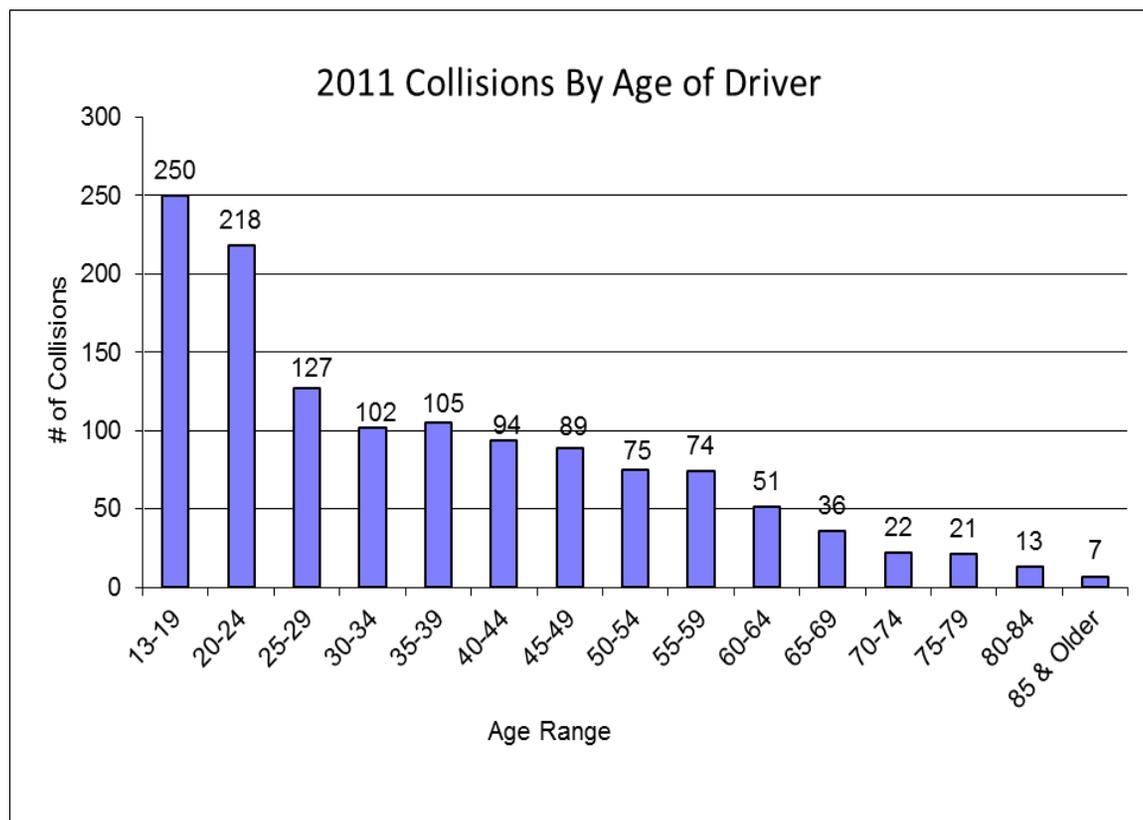


Figure 4.4.2  
 Distribution of Washington State Licensed Drivers  
 By Age and Gender for 2011

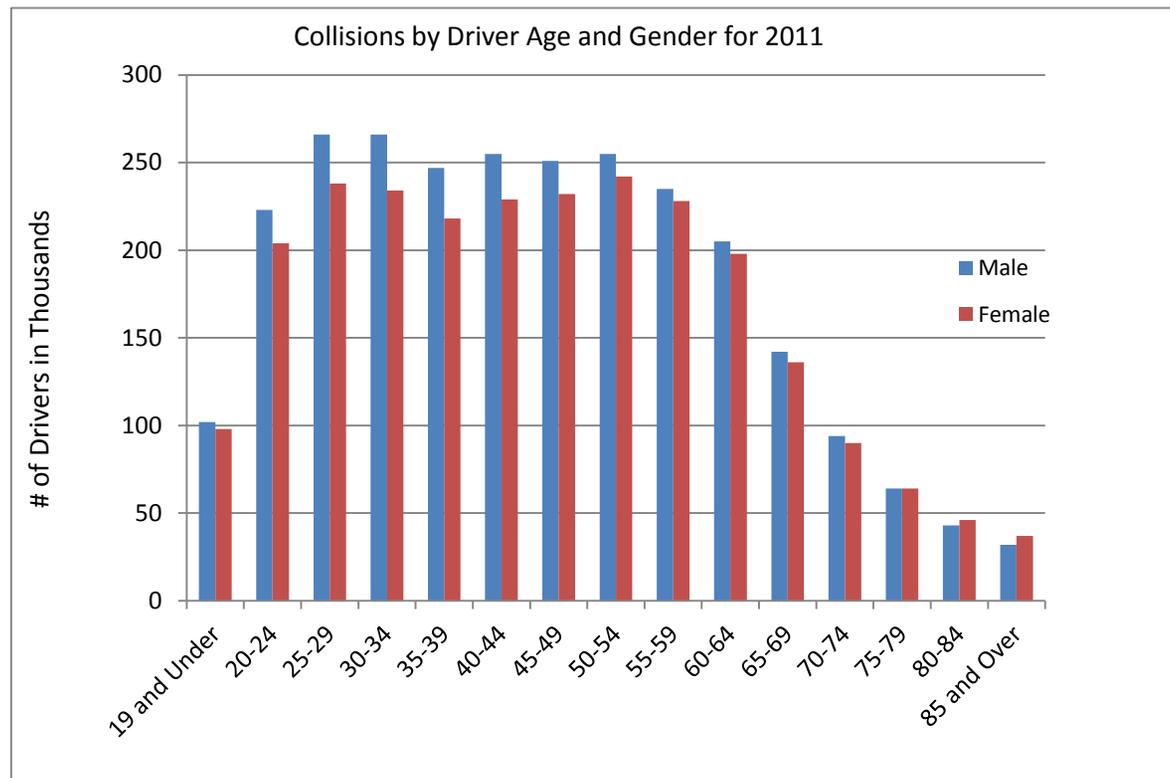


Table 4.4.1  
 Number of Washington State Licensed Drivers  
 By Age and Gender for 2011  
 (in thousands)

Age	Male	Female	Total
19 and Under	102	98	200
20-24	223	204	427
25-29	266	238	504
30-34	266	234	500
35-39	247	218	465
40-44	255	229	484
45-49	251	232	483
50-54	255	242	497
55-59	235	228	463
60-64	205	198	403
65-69	142	136	278
70-74	94	90	184
75-79	64	64	128
80-84	43	46	89
85 and Over	32	37	69

**SOURCE:** U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2011*, Washington, DC: 2011

Table 4.4.2  
Leading Contributing Circumstance  
For Drivers between the Ages of 16-25 for 2011

Leading Contributing Circumstance	16	17	18	19	20	21	22	23	24	25	Totals
Exceeding Safe Speed or Speed Limit	22	21	33	23	20	13	11	10	11	8	172
Did Not Grant Right of Way to Vehicle	11	9	11	6	7	5	7	5	5	1	67
Other	6	4	6	2	8	3	4	4	3	0	40
Under Influence of Alcohol	1	1	2	7	7	5	2	4	8	1	38
Follow Too Closely	5	5	2	7	3	3	1	0	2	3	31
Apparently Asleep	0	1	4	2	4	4	3	0	1	2	21
Inattention	0	5	5	2	1	2	2	1	1	1	20
Over Center Line	4	5	1	0	1	2	4	1	1	0	19
Disregard Stop and Go Light	0	2	3	2	3	0	1	0	0	0	11
None	1	0	0	0	2	2	1	1	1	0	8
Disregard Stop Sign - Flashing Red	1	1	1	1	1	2	0	1	0	0	8
Operating Defective Equipment	0	1	0	0	0	1	1	1	3	0	7
Driver Distractions Outside Vehicle	1	1	0	2	0	1	0	2	0	0	7
Driver Interacting w/ Passengers, Animals	0	0	1	0	1	2	0	0	0	1	5
Other Driver Distractions Inside Vehicle	0	0	1	0	1	0	1	0	0	1	4
Improper Backing	1	0	0	2	0	1	0	0	0	0	4
Improper Turn	0	1	0	0	1	0	0	0	1	0	3
Driver Adjusting Audio or Entertainment	0	1	0	0	1	0	1	0	0	0	3
Apparently Fatigued	0	0	1	1	1	0	0	0	0	0	3
Driver Eating or Drinking	0	0	1	0	0	0	0	0	0	2	3
Improper U-Turn	1	1	0	0	0	0	0	1	0	0	3
Driver Operating Cellphone	0	1	1	0	0	0	0	0	0	0	2
Unknown Driver Distraction	0	2	0	0	0	0	0	0	0	0	2

## 4.5 Contributing Circumstances

Table 4.5.1  
2006 – 2011 Collisions by Contributing Circumstance

<b>Driver One Contributing Circumstances</b>	<b>Fatality</b>	<b>Injury</b>	<b>PDO</b>	<b>Total</b>
Exceeding Reasonable Safe Speed	11	1119	1925	<b>3055</b>
Did Not Grant RW to Vehicle	6	704	1251	<b>1961</b>
Other	8	321	1387	<b>1716</b>
Under Influence of Alcohol	13	405	431	<b>849</b>
Follow Too Closely	0	296	466	<b>762</b>
Exceeding Stated Speed Limit	17	211	300	<b>528</b>
None	3	181	242	<b>426</b>
Inattention	3	135	283	<b>421</b>
Over Center Line	6	97	181	<b>284</b>
Disregard Stop Sign - Flashing Red / Stop and Go Light	1	217	298	<b>516</b>
Apparently Asleep	0	79	148	<b>227</b>
Improper Backing	0	13	186	<b>199</b>
Improper Turn	0	41	150	<b>191</b>
Driver Distractions Outside Vehicle	0	54	106	<b>160</b>
Improper Passing / Improper U-Turn	1	77	192	<b>270</b>
Operating Defective Equipment	0	51	105	<b>156</b>
Fail to Yield Row to Pedestrian	2	121	2	<b>125</b>
Driver Interacting with Passengers, Animals	0	43	54	<b>97</b>
Apparently Ill	2	66	28	<b>96</b>
Other Driver Distractions Inside Vehicle	0	39	50	<b>89</b>
Unknown	1	63	18	<b>82</b>
Driver Operating Phone/Hands Free Phone/Electronic Equipment	0	45	73	<b>118</b>
Unknown Driver Distraction	0	24	36	<b>60</b>
Under Influence of Drugs	1	31	27	<b>59</b>
Apparently Fatigued/Had Taken Medication	0	21	26	<b>47</b>
Driver Eating/Drinking/Smoking/Reading/Writing/Grooming	0	18	37	<b>55</b>
Disregard Yield Sign - Flashing Yellow/Failing to Signal/Headlight Violation/Improper Signal/Improper Parking Location/Disregard Flagger	0	9	10	<b>19</b>

## 4.6 Impairment

Table 4.6.1  
Collisions Involving  
Drivers under the Influence (DUI)

Year	Fatal	% of Fatalities	Injury	% of All Injury	Property Damage Only	% of all PDO	Total	% of all Collisions
2006	9	45.0	132	13.0	128	7.9	269	10.1
2007	4	25.0	106	12.3	102	6.5	212	8.7
2008	7	43.8	81	10.9	93	6.7	181	8.4
2009	3	42.9	73	10.1	111	8.3	187	9.0
2010	2	25.0	76	12.7	95	8.4	173	9.9
2011	3	37.5	76	14.1	68	7.1	147	9.8

Figure 4.6.1  
2011 Weekend Collisions for  
Drivers under the Influence  
By Time of Day

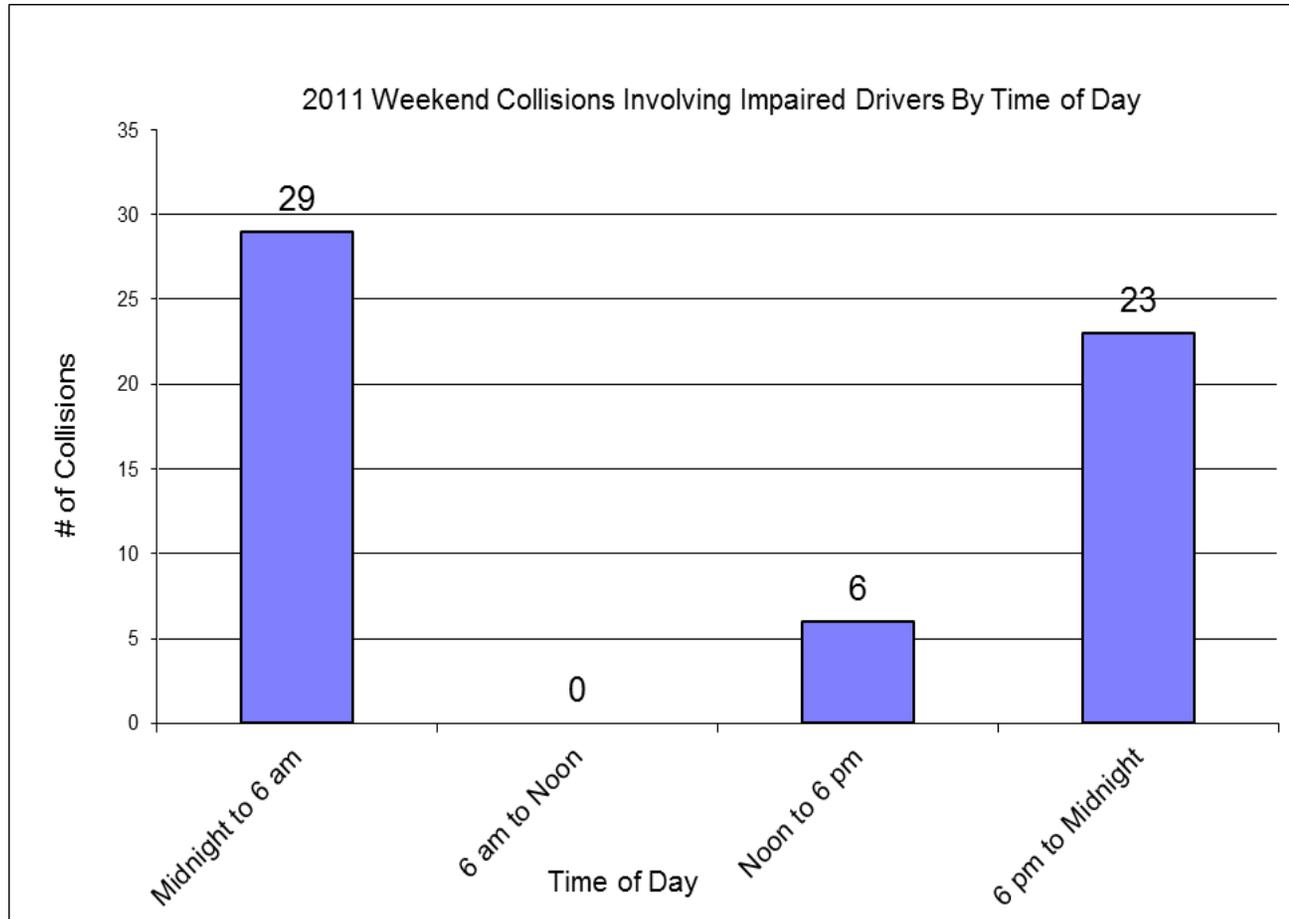
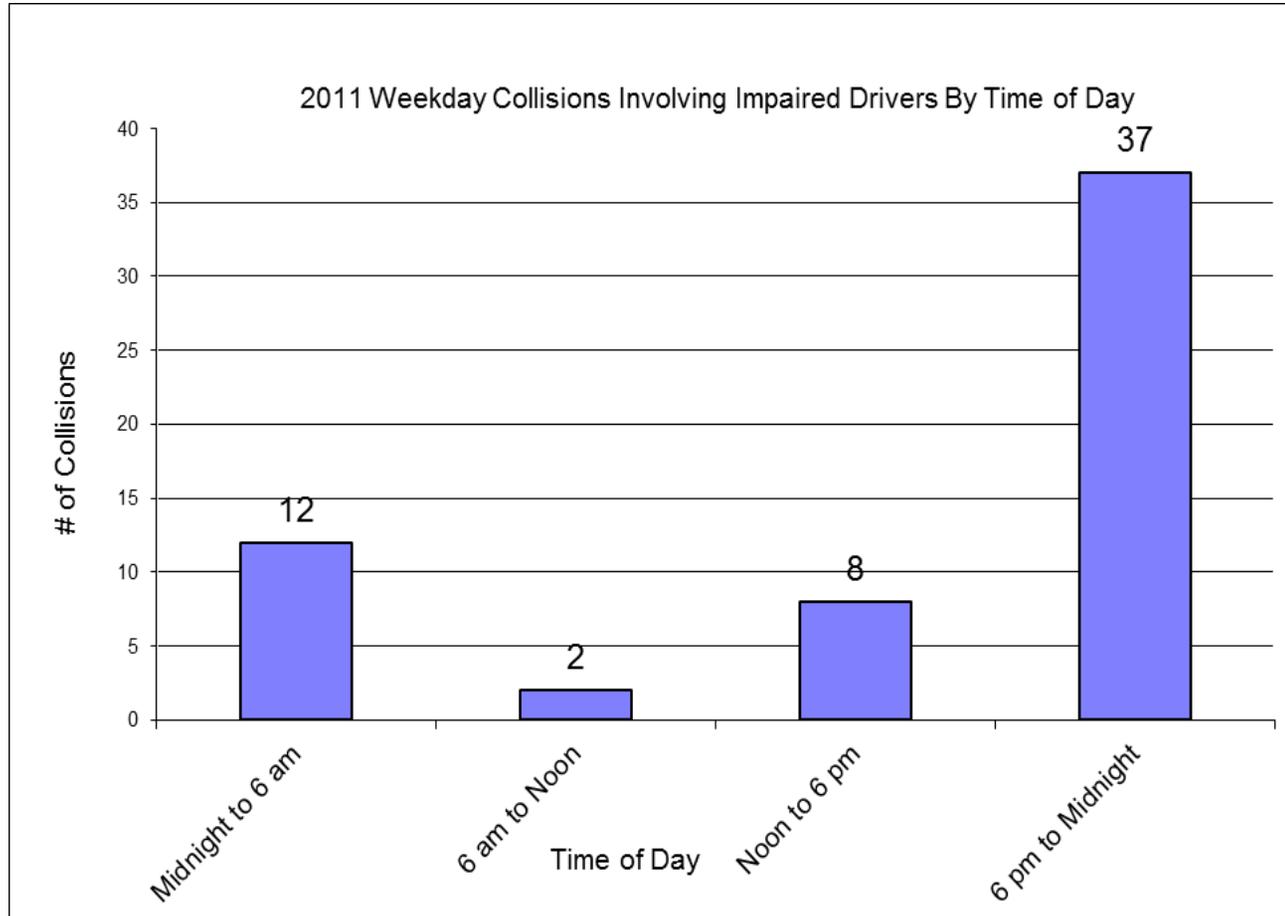


Figure 4.6.2  
2011 Weekday Collisions for  
Drivers under the Influence  
By Time of Day



## 4.7 Speed

Table 4.7.1  
Speeding as a Contributing Circumstance in  
Fatal, Injury, and Property Damage Collisions

Year	Fatal	% of All Fatalities	Injury	% of All Injury	PDO	% of All PDO	Total	% of All Collisions
2006	5	25.0	309	30.5	457	28.1	771	29.0
2007	5	31.3	269	31.2	472	30.2	746	30.6
2008	7	43.8	233	31.3	432	30.9	672	31.1
2009	4	57.1	225	31.2	339	25.3	568	27.4
2010	2	25.0	167	27.8	305	26.9	474	27.2
2011	5	62.5	127	23.5	220	23.1	352	23.5

## 4.8 Lighting Conditions

Table 4.8.1  
2011 Collisions By  
Lighting Condition

Lighting Condition	Fatal	Injury	Property Damage Only	Totals
Daylight	3	333	535	871
Dark-Street Lights On	0	86	188	274
Dark-No Street Lights	5	86	136	227
Dusk	0	18	35	53
Unknown	0	2	25	27
Dawn	0	7	19	26
Dark-Street Lights Off	0	8	14	22
Other	0	0	1	1
Totals	8	540	953	1501

#### 4.9 Economic Costs of 2011 Collisions in King County

Table 4.9.1  
Estimated Societal Costs in Preventing 2011 Collisions

Severity	2011 Collisions	Estimated Cost
Property Damage Only	953	\$5,718,000.00
Injury	540	\$35,100,000.00
Fatal	8	\$8,000,000.00
Total	1501	\$48,818,000.00